

quinquefasciatus have been made as a matter of routine, and nothing has been noted to indicate any degree of sterility between the two stocks in this laboratory. The procedure has been to mate several virgin females of one species to males of the other, obtain F_1 egg rafts, raise these larvae separately, and cross F_1 females by F_1 males. All F_1 individuals are from the same egg rafts. No difficulty has been experienced in obtaining F_1 and F_2 generations.

Our results confirm those of Farid and Sundararaman. In view of these facts, it seems that the barrier of interspecific sterility does not exist, at least in our laboratory stocks, between these species.

LITERATURE CITED

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A New Philippine *Rhyacophila* of Unusual Interest (Trichoptera, Rhyacophilidae)

By HERBERT H. ROSS, Illinois Natural History Survey,
Urbana, Illinois

In caddisfly material collected in the Philippine Islands by Mr. Harry Hoogstraal in 1946 were two collections of a species of *Rhyacophila*, a genus not hitherto reported from the Islands. It proved to be quite different from described species from Formosa and other parts of the Oriental region, but to have striking affinities with the Nearctic fauna.

The genus *Rhyacophila* is composed almost entirely of small complexes of one to a few species, the various complexes extremely distinct from each other and frequently difficult to relate to each other. In North America one such distinctive unit is the *carolina* complex, apparently restricted to eastern North

America and Puerto Rico, and characterized by the curious shovel-shaped lower portion of the aedeagus. Its closest known relative has been the *hyalinata* complex, restricted to the western montane region of North America, and possessing sufficient distinctive characters to indicate a fairly remote relationship between the two.

Dissection of the Philippine species revealed that it is a much closer relative of the *carolina* complex than is the *hyalinata* complex, as evidenced by the scoop-shaped aedeagus and double anal plates; yet at the same time the lateral processes of the scoop in the Philippine species are quite unlike species of the *carolina* complex and instead are suggestive of similarly situated processes found in the *hyalinata* complex. The most logical inference seems to be that all three groups arose from a common and widely distributed ancestor, whose population became fractured into at least three elements, one in the Appalachians, one in the Rockies, and one in the Philippines, each segregate remaining isolated and localized for a great length of time and developing into a distinctive complex.

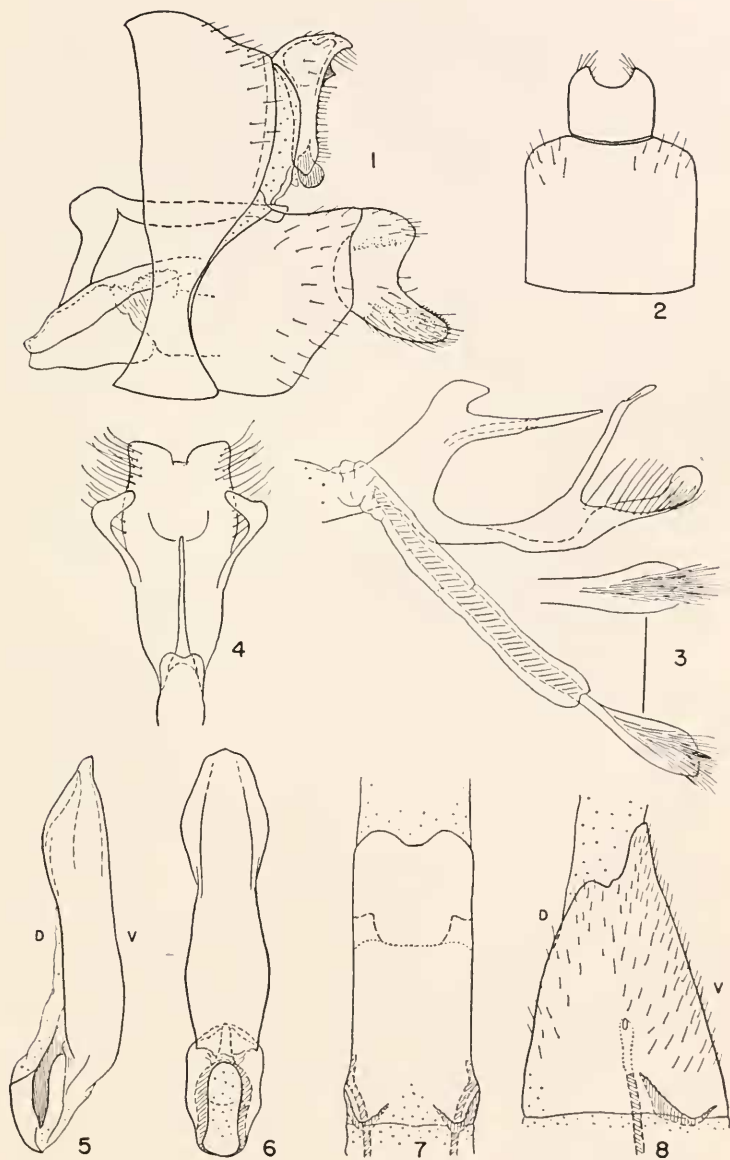
***Rhyacophila davao* new species**

Male.—Length 7.5 mm. Color of body and appendages light yellowish brown except for the dorsum, which is a darker and richer brown, and the wings, which have the stigmal area slightly darker. General structure typical for genus. Genitalia as in figs. 1-4. Ninth segment long dorsad, narrowed to a thin strap near ventral margin, the base of the dorsal margin elevated into a hump. Clasper short and deep, basal segment much deeper than long and with a nearly angulate postero-ventral corner; apical segment also short and deep, with a rounded dorsal heel and a produced, rounded ventral toe. The inner

FIGS. 1-8

EXPLANATION OF PLATE

Rhyacophila davao new species. Fig. 1. Male genitalia, lateral aspect. Fig. 2. Same, dorsal aspect of tergites. Fig. 3. Aedeagus, lateral aspect. Fig. 4. Mesal portion of aedeagus, dorsal aspect. Fig. 5. Spermatheca, lateral aspect. Fig. 6. Same, ventral aspect. Fig. 7. Eighth segment, ventral aspect. Fig. 8. Same, lateral aspect. *D*, dorsal side; *V*, ventral side.



face of the clasper bears a dorsal strap running from the base to the dorsal fulcrum of the aedeagus and two patches of dark peglike spines on the apical segment, their position shown by stippling in fig. 1. Tenth segment short but deep, its dorsal margin projecting forward, its dorsal aspect excavated, fig. 2, its ventral extremity ending in a pair of separate, ovate anal plates. Aedeagus with a complex internal basal structure composed of a dorsal fulcrum articulating with the claspers and tenth tergite, and an irregular vasiform base from which arises the body of the aedeagus. Body of aedeagus, fig. 3, composed of a pair of long, lateral arms, each ending in a spatulate lobe bearing a mesal brush of stiff hair, and having a sclerotized base extending down the full length of the arm; and a mesal portion formed of (1) a dorsal portion, subdivided into a short, slightly bifid, dorsal process, and a longer, slender, single portion bearing the penis opening, and (2) a ventral, scoop-shaped portion which is divided at extreme apex into two oblique short lobes, and bears laterally a pair of long slender arms projecting almost directly dorsad. Between these lateral arms and the apex, the scoop bears an irregular series of long bristles.

Female.—Length 8 mm. Color and general structure as for male. Eighth segment moderately long; lateral aspect, fig. 8, widest at base, tapering gradually to apex, ventral side much longer than dorsal, with a crescentic invagination near base, and with tendon not reaching the small apodemal opening; ventral aspect nearly parallel sided as seen in a cleared specimen, fig. 7, the apical margin gently incised, the apex of the dorsal margin ending in sharp lateral corners joined by a membranous intervening area. Spermatheca, figs. 5, 6, heavily sclerotized, robust and pointed, the ventral aspect with an expanded portion just beyond middle.

Holotype, male.—East slope of Mt. McKinley, elev. above 3000 feet, Davao province, Mindanao, PHILIPPINE ISLANDS, Aug. 22, 1946, H. Hoogstraal (Chicago Natural History Museum). *Allotype, female*.—Same data, but Aug. 21. *Paratypes*.—Same data as for holotype, 2 ♂, 1 ♀; same data as for allotype, 1 ♂; in the collections of the Chicago Natural History Museum and the Illinois Natural History Survey.